

SUBSTITUTE FORM PTO-1449
(MODIFIED)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
00232/194001SERIAL NO.
09/292,152INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Use several sheets if necessary)APPLICANT
Michael A. FischerFILING DATE
April 15, 1999GROUP
3752

(37 CFR 1.98(b))

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
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FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AL							
	AM							
	AN							
	AO							
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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

80	AQ	National Fire Protection Association. NFPA 13 - Standard for the Installation of Sprinkler Systems (1996 edition), pp 13-1 through 13-148.
80	AR	National Fire Protection Association. NFPA 231 - Standard for General Storage (1998 edition), pages 231-1 through 231-31.
80	AS	National Fire Protection Association. NFPA 231C - Standard for Rack Storage of Materials (1998 edition), pages 231C-1 through 231C-75.

EXAMINER

DINH Q. NGUYEN

DATE CONSIDERED

1/19/00

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Sheet 1 (A) of 1

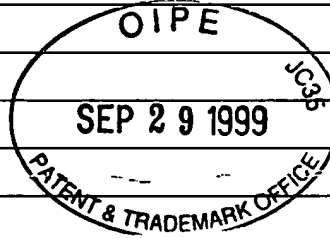
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							YES	NO
ASW	AL	WO 98/18525	05/1998	WIPO [corresponds to US 5,829,684]	A62C	31/02	ENG	
	AM							
	AN							
	AO							
	AP							

OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

ASW	AQ	Search Report under Section 17, issued by GB Patent Office for corresponding GB Patent Application No. 9911294.8 (dated 24 August 1999).						
	AR							
	AS							

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
DN	AA	5	6	8	7	9	1	4	11/18/97	Bosio et al.	239	498	
DN	AB	5	8	3	9	6	6	7	11/24/98	Fischer	169	37	
DN	AC	5	8	6	2	9	9	4	01/26/99	Pounder et al.	239	498	
DN	AD	5	8	6	5	2	5	6	02/02/99	Pounder	169	37	
DN	AE	5	8	9	0	6	5	7	04/06/99	Ponte	239	498	
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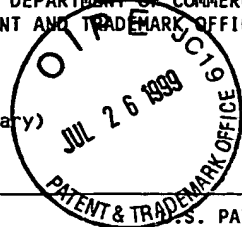
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SN	AA	5 9 1 5 4 7 9	06/29/99	G.W. Ponte	169	46	
	AB						
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JUL 28 1999
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FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

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						YES NO
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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

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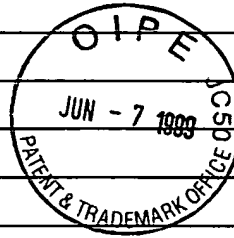
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U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>DN</i>	AA		7	2	0	0	1	3	02/10/03	Esty			
<i>DN</i>	AB	1	1	6	5	3	1	3	12/21/15	Bower			
<i>DN</i>	AC	2	8	6	2	5	6	5	12/02/58	Dukes			
<i>DN</i>	AD	4	2	9	6	8	1	5	10/27/81	Mears			
<i>DN</i>	AE	4	2	9	6	8	1	6	10/27/81	Fischer			
<i>DN</i>	AF	4	5	8	0	7	2	9	04/08/86	Pounder			
<i>DN</i>	AG	4	9	0	1	7	9	9	02/20/90	Pepi et al.			
<i>DN</i>	AH	5	1	5	2	3	4	4	10/06/92	Fischer et al.			
<i>DN</i>	AI	5	5	8	4	3	4	4	12/17/96	Meyer et al.			
<i>DN</i>	AJ	5	8	2	9	5	3	2	11/03/98	Meyer et al.			
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U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER								ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
DN	BA	3	5	2	5	4	0	2		08/1970	Hattori			
	BB	3	6	5	3	4	4	4		04/1972	Livingston			
	BC	3	6	8	2	2	5	1		08/1972	Livingston			
	BD	3	7	2	2	5	9	6		03/1973	Livingston			
	BE	3	7	6	8	7	3	6		10/1973	Cox			
	BF	3	8	1	2	9	1	5		05/1974	Livingston			
	BG	3	8	8	8	3	1	3		06/1975	Freeman			
	BH	3	9	0	4	1	2	6		09/1975	Allard			
	BI	4	0	9	1	8	7	3		05/1978	Werner			
	BJ	4	0	9	9	6	7	5		07/1978	Wohler et al.			
	BK	4	1	3	6	7	4	0		01/1979	Groos et al.			
	BL	4	2	7	9	3	0	9		07/1981	Fischer et al.			
	BM	4	4	0	5	0	1	8		09/1983	Fischer			
	BN	4	6	5	7	0	8	5		04/1987	Jacobsen			
	BO	4	8	0	0	9	6	1		01/1989	Klein			
	BP	4	9	3	0	5	7	8		06/1990	Barnett et al.			
	BQ	5	0	3	6	9	2	3		08/1991	Shea			
	BR	5	0	9	4	2	9	8		03/1992	Polan			
	BS	5	3	6	6	0	2	2		11/1994	Meyer et al.			
	BT	5	5	7	9	8	4	6		12/1996	Meyer et al.			
	BU	5	6	0	9	2	1	1		03/1997	Meyer et al.			
DN	BV	5	6	6	4	6	3	0		09/1997	Meyer et al.			
	BW													
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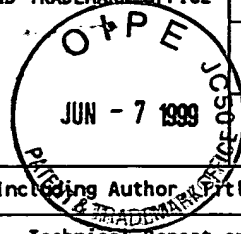
JUN 10 1999

ASU	CA	Underwriters Laboratories Inc., UL 1767, "Standard for Safety, Early-Suppression Fast-Response Sprinklers", First Edition, Feb. 1990	TECHNOLOGY CENTER 3700
		Factory Mutual Engineering Corp., "Loss Prevention Data 2-2, Early Suppression Fast Responses Sprinklers", April 1987	
	CB	Factory Mutual Research, "Approval Standard, Early Suppression Fast Response Automatic Sprinklers", June 1986	
		"Automatic" Sprinkler Corporation of America product sheets entitled "Automatic ESFR Glass Bulb Sprinkler", Feb. 1988 (pp. J 5.3, J 5.4)	
	CD	ASCOA First Systems data sheets entitled "Automatic ESFR Glass Bulb Sprinkler", March 1992 (pp. 1.1, 1.2)	
	CE	Grinnell Corporation data sheets entitled "Early Suppression Fast Response Sprinklers/Model ESFR-1 Pendant, 14.3 K-Factor", April 1988	
		Reliable Automatic Sprinkler product announcement, "ESFR Model H Early Suppression Fast Response Sprinklers", Oct. 1992 (3 pp. total)	
	CG	Central Sprinkler Company catalog sheets entitled "Central ESFR-1 3-93/ESFR Early Suppression Fast Response", March 1993 (4 pp)	
		Drawing entitled, "International Jumbo Sprinkler Head--Deflector", DWG. No. 1-117, Automatic Sprinkler Co. of America, Mar. 1926 (1 pg)	
	CH	Sheet entitled "Grinnell Jumbo Sprinkler Issue A", Grinnell Corp., Feb. 1969 (1 pg)	
		Drawing entitled "Solder-Type--Issue A 1/14" Grinnell Jumbo Sprinkler Yoke, Body, Strut, Diaphragm and Disc", General Fire Extinguisher Company, April 1917 (1 pg)	
	CI	Drawing entitled "1" Grinnell Jumbo Sprinkler Detail Solder Type Issue 'A', General Fire Extinguisher Co., April 1917 (1 pg)	
		NJ Thompson, Fire Behavior and Sprinklers, Chapter 6 "Automatic Sprinkler Protection", National Fire Protection Association, 1964, Foreward, Table of Contents (pp. 72-91)	
AN	CM	Newsletter for Fire Protection Engineers and Industry, No. 11, July 1968, Orinda, California (8 pp)	

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DA	D.G. Goodfellow et al., Technical Report entitled "Optimization of Sprinkler Protection for United States Postal Service III. Protection of Plastic Letter Trays", Factory Mutual Research Corp., Oct. 1971 (39 pp)
DB	D.G. Goodfellow, Technical Report entitled "Optimization of Sprinkler Protection for United States Postal Facilities/IV Protection of Plastic Letter Trays with 0.64--in. Retrofit Sprinklers, Factory Mutual Research Corporation, July 1974 (30 pp. with cover and introductory pages)
DC	E.W.J. Troup, Technical Report entitled "New Developments in Ceiling--Level Protection for the High-Challenge Fire", Factory Mutual Research Corporation, Jan. 1974
DD	P.J. Chicarello et al., Technical Report entitled "Large-Scale Fire Test Evaluation of Early Suppression Fast Response (ESFR) Automatic Sprinklers", Factory Mutual Research Corp., May 1986 (cover-p. 18-pp.122-128)
DE	C. Yao, "The Development of the ESFR Sprinkler System", First Safety Journal, Elsevier Scientific Ltd., Kidlington, Oxford, U.K., 1988, Vol. 14, No. 11 (pp. 65-73)
DF	C. Yao, "Overview of FMRC's Sprinkler Technology Research", Factory Mutual Research Corporation, May 1992
DG	Approved Product News, Factory Mutual Engineering Corp., Vol. 4, No. 2, Dec. 1988 (pp. 1-5, 8-12, 16)
DH	Fire Protection Handbook, 17th Edition, National Fire Protection Association, 1991, Title page, inner page, Table of Contents, p. IX and pp. 5-127 through 5-163 and 5-174 through 5-197)
DI	K. Bell, "Presentation to American Fire Sprinkler Association--Large K-Factor Sprinklers", Nov. 1992 (59 pp. total: 19 pp. text and 40 pp. slide photocopies)
DJ	Color photocopies of six color photographs of sprinkler case with "I.S. Co." on deflector and PAT.03 on the body and 1903 stamped on the release link (labeled June 1995) (2 pp.)
DK	Color photocopies of six color photographs of sprinkler case with "Globe" and 280 on body, G A S Co. on deflector and stamped 1926 on release ink (labeled June 1995) (2 pp.)
DL	Color photocopies of five color photographs of Grinnell Corporation "Jumbo A" automatic sprinkler--1 1/4" orifice, (labeled June 1995) (2 pp.)
DM	Color photocopies of five color photographs of Grinnell Corporation, "Jumbo A" automatic sprinkler--1" orifice, (labeled June 1995) (2 pp.) (body painted red)
DN	

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